

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

Petro Mohyla Black Sea National University

Medical Institute

Department of Hygiene, Social Medicine and Public Health



«APPROVED»

The first vice-rector

Mykhalishchenko

_____ 2020

CURRICULUM WORKING PROGRAM

Emergency and urgent medical care

field of knowledge 22 «Health care»

in the specialty 222 «Medicine»

Developer

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1. Description of the discipline

Characteristic	Characteristics of the discipline	
Name of discipline	Emergency and urgent medical care	
Branch of knowledge	22 "Health care"	
Specialty	222 "Medicine"	
Specialization (if any)		
Educational program	Medicine	
Level of higher education	Master	
Discipline status	Normative	
Curriculum	5th	
Academic year	2020-2021	
Semester numbers:	Full-time	Correspondence form
	10th	
Total number of ECTS credits / hours	3 credits / 90 hours	
Course structure: - lectures - practical training - hours of independent work of students	Full-time	Correspondence form
	4 hours	
	26 hours 60 hours	
Percentage of classroom load	33%	
Language of instruction	Ukrainian	
Form of final control	Diff. credit - 10th semester	

2. Purpose, tasks and planned learning outcomes

The purpose of teaching / studying the discipline "Emergency and emergency care" as a discipline is an integral part of clinical medicine, so the study of the basic principles of this field of science - an important point in training a doctor of any specialty. in accordance with the block of its content module and is the basis for building the content of the discipline.

Objectives of study: acquisition by the student of competences, knowledge, abilities and skills for implementation of professional activity on a specialty:

- to determine the basic principles of organization and provision of emergency and urgent medical care in Ukraine;
- develop the skills of diagnosis of emergency conditions at the scene composed of teams of emergency medical aid (leader member) and the department of emergency medical care multidisciplinary hospital
- learn to recognize emergencies in the work of a general practitioner - family medicine, clinic, hospital department;
- learn to determine the protocol of emergency medicine, which best corresponds to the symptoms of the victim (patient);
- to provide emergency medical assistance according to a defined protocol of medical emergency state of implementation of adequate procedures.
- master the organizational principles of emergency and emergency medical care and peacetime emergencies;

- examine the sequence of action teams of emergency medical assistance in the event of massive damage;
- learn to conduct medical sorting of victims.

Prerequisites for studying the discipline (interdisciplinary links). Emergency and emergency medical care as a discipline:

a) it is based on the study of students - human anatomy; histology, biochemistry, physiology, pathomorphology; pathophysiology; surgery, internal medicine, pediatrics, pharmacology and integrates with these disciplines;

b) is an integral part of all clinical disciplines and includes their most important sections, including internal medicine, pediatrics, surgery, traumatology and orthopedics, neurosurgery, urology, obstetrics and gynecology and other disciplines, involving the integration of teaching with these disciplines and ability to apply knowledge in the process of further study and professional activity;

c) provides an opportunity to gain practical skills and develop professional skills for the diagnosis and provision of emergency medical care and intensive care for certain pathological conditions and during the care of patients;

d) forms the methodological foundations of clinical thinking.

Expected learning outcomes. As a result of studying the discipline, students have:

- Be able to examine and study patients in the intensive care unit with a discussion of the plan and tactics of their treatment;
- Demonstrate knowledge of etiology, pathogenesis, pathophysiology and intensive care of emergencies;
- Demonstrate skills in diagnosing clinical death and resuscitation;
- Use the knowledge of mastering special practical skills on phantoms and mannequins, practical use of diagnostic methods and intensive care;
- Demonstrate ownership methods of diagnosis and providing assistance during major syndromes violations of vital functions;
- Determine the scope of examinations and demonstrate their evaluation in violation of vital functions;
- Analyze diagnostic methods and clinical course of the main syndromes that accompany severe disorders of vital functions;
- Formulate the choice of algorithms for intensive care of various emergencies.
- Solve clinical situational problems and tests.

According to the requirements of the educational and professional program, students must:

KNOW :

- basic concepts of general nosology: health, disease, pathological process, typical pathological process, pathological reaction, pathological condition, etiology, pathogenesis;
- various types of disorders of water-electrolyte metabolism and acid-base status;
- Main syndromes that are characterized for liver and kidney failure;
- clinical manifestations of comatose states of various genesis;
- various types of acute poisoning;
- stages of cardiopulmonary and cerebral resuscitation;
- methods of providing assistance in emergencies caused by environmental factors ;
- principles of severity assessment, monitoring and care for patients with traumatic brain, thoracic and skeletal injuries;
- basic bases of pathogenesis, diagnosis and intensive care of traumatic, septic, burn shock;

- understanding of the basic provisions of rational antibiotic prophylaxis and antibiotic therapy;
- understanding the etiology and pathogenesis of critical conditions associated with allergic reactions. Demonstrate the ability to provide emergency care to a patient with anaphylactic shock;
- basic basics of clinical pharmacology of drugs used in pain therapy (NSAIDs, narcotic analgesics, local anesthetics).

BE ABLE:

- demonstrate the technique of maintaining airway patency, artificial lung ventilation and closed heart massage, electrical defibrillation;
- assess the severity of the patient's condition with trauma, plan tactics for providing care to the patient with combined injuries;
- demonstrate the ability to plan infusion and transfusion therapy of patients in critical condition;
- display technology support patency of the respiratory tract, artificial ventilation and closed cardiac massage, electrical defibrillation;
- to formulate the basic principles of correction and intensive care of various types of disorders of water-electrolyte metabolism and acid-base status;
- to make schemes of carrying out infusion therapy at various disturbances of a homeostasis;
- to formulate the basic principles of intensive care of comatose states of different origin;
- interpret patterns of occurrence of violations vitally important functions in acute poisoning;
- solving clinical situational problems and tests.- diagnosing emergencies: under any circumstances (at home, on the street, in a medical institution , etc.), in conditions of lack of information and limited time, using standard methods of examination and data of possible anamnesis, knowledge of a person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision and assessing the human condition to diagnose;
- carrying out medical and evacuation measures: in the conditions of an emergency situation, including martial law, during the detailed stages of medical evacuation, taking into account the existing system of medical and evacuation support, to organize medical and evacuation measures among the population and servicemen;
- Determining the tactics of emergency medical care: under any circumstances, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision, based on the diagnosis of emergency in a limited time using standard schemes to determine tactics providing emergency medical care.

MOTHER OF COMPETENCE

- on the application of knowledge on emergency and urgent medical care to promote a healthy lifestyle;
- about the main perspective directions of development of emergency and urgent medical care.

The developed program corresponds to the *educational-professional program (OPP)* and is focused on the formation of *competencies*:
general (ZK) - ZK1-ZK3 OPP:

ZK1. Ability to abstract thinking, analysis and synthesis, the ability to learn and master modern knowledge.

ZK2. Ability to apply knowledge in practical situations.

ZK3. Knowledge and understanding of the subject area and understanding of professional activity.

professional (FC) - FC1-9; FC11; FK18 OPP:

FC1. Patient interviewing skills.

FC2. Ability to determine the required list of laboratory and instrumental studies and evaluate their results.

FC3. Ability to establish a preliminary and clinical diagnosis of the disease.

FC4. Ability to determine the required mode of work and rest in the treatment of diseases.

FC5. Ability to determine the nature of nutrition in the treatment of diseases.

FC6. Ability to determine the principles and nature of disease treatment.

FC7. Ability to diagnose emergencies.

FC8. Ability to determine the tactics of emergency medical care.

FC9. Emergency care skills.

FC11. Skills to perform medical manipulations.

FC18. Ability to keep medical records.

program learning outcomes (PRN) - PRN11, PRN13-20, PRN22, PRN25, PRN28, PRN30, PRN32, PRN33, PRN35, PRN41 OPP :

PRN11. Collect data on patient complaints, medical history, life history (including professional history), in a health care facility, its unit or at the patient's home, using the results of the interview with the patient, according to the standard scheme of the patient's survey. Under any circumstances (in the health care facility, its unit, at the patient's home , etc.), using knowledge about the person, his organs and systems.

PRN13. In terms of establishment health care, his department and among the population attached: to identify and secure leading clinical symptom or syndrome by making reasonable decisions, using preliminary data history of the patient, physical examination of the patient data, the knowledge of a person of organs and systems, adhering Be able to establish the most probable or syndromic diagnosis of the disease by making an informed decision, for the patient and the patient's examination, based on the leading clinical symptom or syndrome, using knowledge about the person, his organs and systems, adhering to relevant ethical and legal norms

PRN14. In the health care institution, its subdivision: to appoint laboratory and / or instrumental examination of the patient by making an informed decision, based on the most probable or syndromic diagnosis, according to standard schemes, using knowledge about the person, his organs and systems, adhering to appropriate ethical and Carry out differential diagnosis of diseases by making an informed decision, according to a certain algorithm, using the most probable or syndromic diagnosis, data of laboratory and instrumental examination of the patient, knowledge about the person, his organs and systems, adhering to relevant ethical and legal norms. Establish a preliminary clinical diagnosis by making an informed decision and logical analysis, using the most probable or syndromic diagnosis, laboratory and instrumental examination of the patient, the conclusions of differential diagnosis, knowledge of man, his organs and systems, following relevant ethical and legal norms.

PRN15. Determine the necessary mode of work and rest in the treatment of the disease, in a health care facility, at the patient's home and at the stages of medical evacuation, including in the field , on the basis of a preliminary clinical diagnosis, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

PRN16. To determine the necessary nutritional therapy in the treatment of diseases in terms of health care facility, home of the patient and the stages of medical evacuation in t. H. In field conditions on the basis of previous clinical diagnosis using knowledge of human, his organs and systems, adhering relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

PRN17. Determine the nature of treatment (conservative, operative) of the disease , in a health care facility, at home at the patient and at the stages of medical evacuation, including in the field on the basis of a preliminary clinical diagnosis, using knowledge about the person, his organs and systems , adhering to the relevant ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes. Determine the principles of treatment of the disease, in a health care facility, at the patient's home and at the stages of medical evacuation, including field conditions, based on a previous clinical diagnosis, using knowledge about the person, his organs and systems, adhering to appropriate ethical and legal norms, by making an informed decision according to existing algorithms and standard schemes.

PRN18. Establish a diagnosis by making an informed decision and assessing the human condition, under any circumstances (at home, on the street, health care facility, its units), including in an emergency, in the field, in a lack of information and limited time, using standard methods of physical examination and possible history, knowledge of the person, his organs and systems, adhering to the relevant ethical and legal norms.

PRN19 Determine the tactics of emergency medical care, under any circumstances, using knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision, based on the diagnosis of emergency (list 3) for a limited time using standard schemes.

PRN20 Provide emergency medical care for any circumstances, using the knowledge of human, his organs and systems, adhering to appropriate ethical and legal norms by making reasonable decisions on the basis of the diagnosis of immediate state (the list 3) in conditions of limited time in accordance with a defined tactics using standard schemes.

PRN22. Perform medical manipulations in a medical institution, at home or at work on the basis of previous clinical diagnosis and / or indicators of the patient's condition, using knowledge about the person, his organs and systems, adhering to relevant ethical and legal norms, making informed decisions and using standard techniques.

PRN25. To form, in the conditions of a health care institution, its division on production, using the generalized procedure of an estimation of a state of human health, knowledge of the person, its bodies and systems, adhering to the corresponding ethical and legal norms, by acceptance of the reasonable decision, among the fixed contingent of the population. : dispensary groups of patients, groups of healthy people subject to dispensary supervision (newborns, children, adolescents, pregnant women, representatives of professions that must undergo a mandatory dispensary examination).

PRN28. Organize secondary and tertiary prevention measures among the assigned population, using a generalized procedure for assessing human health (screening, preventive medical examination, seeking medical care), knowledge about the person, his organs and systems, adhering to the relevant ethical and legal norms, by making an informed decision, in the conditions of the health care institution, in particular: to form groups of dispensary supervision, to organize medical and health-improving measures differentiated from the group of medical examination.

PRN30. Carry out in the conditions of a health care institution, its subdivision: detection and early diagnosis of infectious diseases ; primary anti-epidemic measures in the center of an infectious disease.

PRN32. In health care facilities or at home for a patient based on the received data on the health status of the patient, using standard schemes, using the knowledge of human, his organs and systems, adhering to appropriate ethical and legal norms by adopting a reasoned decision, determine the tactics of examination and secondary prevention of patients subject to dispensary supervision; to

determine the tactics of examination and primary prevention of healthy persons subject to dispensary supervision; calculate and prescribe the necessary food for children in the first year of life.

PRN33. Determine the presence and degree of restrictions on life, type, degree and duration of disability with the issuance of relevant documents in a health care institution on the basis of data on the disease and its course, features of professional activity.

PRN35. On the territory of the service according to standard methods of descriptive, analytical epidemiological and medical-statistical research: to conduct screening to identify the most important non-communicable diseases; assess the dynamics and in comparison with a static medium data rates of morbidity, in fact including chronic non-communicable diseases, disability, mortality, integrated health indicators; identify risk factors for the occurrence and course of diseases; to form risk groups of the population.

PRN41. In the conditions of a health care institution or its subdivision according to standard methods: to select and use unified clinical protocols for the provision of medical care, developed on the basis of evidence-based medicine; take part in the development of local protocols for medical care; to control the quality of medical care on the basis of statistical data, expert evaluation and sociological research data using indicators of structure, process and results of activities; identify factors that hinder the improvement of the quality and safety of medical care.

3. The program of the discipline

The educational process is organized according to the European Credit Transfer and Accumulation System (ECTS).

The program of the discipline "Emergency and emergency medical care" is structured in one module.

The structure of the discipline

Name the topics	Total hours	L.	p.t.	ing. w.
1	2	3	4	5
Topic 1. Organization of emergency and emergency care in Ukraine.	10.5	0.5	4	6
Topic 2. The procedure for providing emergency medical care to victims and patients at the pre- hospital stage. Initial examination.	8.5	0.5	2	6
Topic 3. The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Secondary examination.	10.5	0.5	2	8
Topic 4. Modern means of ensuring airway patency and artificial lung ventilation in adults.	10.5	0.5	2	8
Topic 5. Stopping blood circulation and respiration. Emergency medical care technology .	12.5	0.5	4	8
Topic 6. Emergency medical care for mass injuries.	12.5	0.5	4	8
Topic 7. Diagnosis and treatment of emergencies at the scene.	12.5	0.5	4	8
Topic 8 . Emergency medical care for mechanical injuries.	12.5	0.5	4	8
TOGETHER	90	4	26	60

4. The content of the discipline

4.1. Lecture plan

№	TOPIC	Number of hours
1.	<p>Topic 1 - 4. Organization of emergency and emergency care in Ukraine. Definition and tasks of the emergency medical care system. Ensuring the functioning of the emergency medical care system.</p> <p>The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Initial examination. Deepening and consolidating students' theoretical knowledge and practical skills needed in providing emergency care in an emergency situation.</p> <p>The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Secondary examination. Organizational aspects of the secondary examination of the victim. The sequence of emergency medical care in a peacetime emergency.</p> <p>Modern means of ensuring airway patency and artificial lung ventilation in adults. The causes of upper airway obstruction (ALS) are classified according to the level of their occurrence.</p>	2
2.	<p>Topic 5 - 8. Stopping blood circulation and respiration. Emergency medical care technology. Methods of providing emergency medical care, stages and stages of cardiopulmonary resuscitation.</p> <p>Emergency medical care for mass injuries. General provisions of medical sorting in the centers of mass lesions. Legal, organizational, medical and deontological features of emergency and emergency care with adaptation to modern clinical protocols.</p> <p>Diagnosis and treatment of emergencies at the scene. Recognition of emergencies in the work of a general practitioner - family medicine, clinic, hospital department (regardless of profile) and the sequence of medical care for emergencies at the scene according to approved protocols.</p> <p>Emergency medical care for mechanical injuries. Diagnosis and treatment at the prehospital stage of mechanical injuries of the skull, spine, chest, abdominal organs, pelvis and pelvic organs, limbs.</p>	2
TOGETHER		4

4.2. Plan of practical classes

№	TOPIC	Number of hours
1.	<p>Topic 1. Organization of emergency and emergency care in Ukraine. Definition and tasks of the emergency medical care system. Ensuring the functioning of the emergency medical care system. Center for emergency medical care and disaster medicine, structure and tasks. Ambulance station and its subdivisions. Actions of medical staff emergency medical care during emergencies. Department of emergency (emergency) medical care of the hospital. Secondary (specialized) medical care (AMC). Medical institutions that will be part of hospital districts. Organization of medical sorting after emergency reform medical care in emergencies. Features of the organization of medical care and sorting in case of mass casualties.</p>	4
2.	<p>Topic 2. The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Initial examination. Deepening and consolidating students' theoretical knowledge and practical skills needed in providing emergency care in an emergency situation. Learn to recognize emergencies in the work of a general practitioner - family medicine, clinic, hospital</p>	

	department (regardless of profile); master the organizational principles of emergency medical care and peacetime emergencies; to study the sequence of actions of emergency medical teams in case of mass casualties.	2
3.	<p>Topic 3 . The procedure for providing emergency medical care to victims and patients at the pre-hospital stage. Secondary examination.</p> <p>Organizational aspects of the secondary examination of the victim. The sequence providing emergency medical assistance in case of emergency situations in peacetime. Vmityrozpiznavaty urgent states in working doctor (regardless of the profile). Perform consistent, step-by-step actions of the emergency medical team during the secondary examination according to the protocol №1. The examination is performed only after the stabilization of the victim's condition. Phased secondary review. The procedure for providing assistance to several victims.</p>	2
4.	<p>Topic 4. Modern means of ensuring airway patency and artificial lung ventilation in adults.</p> <p>Causes of upper respiratory tract obstruction (AIR) are classified according to the level of their occurrence. Revision and rehabilitation of the oral cavity by manual and hardware methods. Use of oropharyngeal (oropharyngeal), nasopharyngeal (nasopharyngeal) tube, use of a manual device for artificial lung ventilation (Ambu). Indications and technique of intubation of the victim, the use of alternative methods to ensure airway patency with a mask, laryngeal tube, combi tube. Symptoms of partial and complete airway obstruction, methods of its recovery. Indications and technique of conic puncture and conicotomy. Familiarity with a portable ventilator.</p>	2
5.	<p>Topic 5. Circulatory and respiratory arrest. Emergency medical care technology .</p> <p>Methods of providing emergency medical care, stages and stages of cardiopulmonary resuscitation. The algorithm of IVL and closed heart massage by one and two resuscitators is worked out in detail on the mannequin .</p> <p>Legal, organizational, medical and deontological features of the provision emergency and emergency care with adaptation to modern clinical protocols. Protocols of the European Council of Resuscitation at different kinds of stopping cardiac activity (rhythms to defibrillation and rhythms not to defibrillation) to use the necessary equipment and tools. Classic errors and complications that occur during cardiopulmonary resuscitation, legal and ethical aspects of cardiopulmonary resuscitation. Signs of clinical death and the implementation of appropriate clinical protocols.</p>	4
6.	<p>Topic 6. Emergency medical care for mass injuries.</p> <p>General provisions of medical sorting in the centers of mass lesions. Educational logistics and plan-scheme of the sorting site; imitation coupons and medical sorting cards. Interaction brigades emergency medical assistance from rescue services. The responsibility of each of them. The order of operations (algorithm of) health care workers brigades emergency medical care, which first came into focus of mass destruction. Implementation of triage affected (simulation passes) and filling out medical cards sortuvannya.Zahalni requirements on conducting medical triage victims and patients in the prehospital phase and in the emergency department (departments of emergency medical care) health care facilities, including the hospital suffered due to emergency situations.</p>	4
7.	<p>Topic 7. Diagnosis and treatment of emergencies at the scene.</p> <p>Recognition of emergencies in the work of a general practitioner - family medicine, clinic, hospital department (regardless of profile) and the sequence of medical care in emergencies at the scene according to approved protocols. Anaphylactic shock, etiology, pathogenesis, clinic, diagnosis and emergency care at the prehospital</p>	

	stage. Poisoning by an unknown substance, etiology, pathogenesis, clinic, diagnosis and emergency care at the prehospital stage. General classification of poisons. Toxicological classification of poisons (by the nature of toxic action) Tactics of the doctor at acute poisonings by an unknown poison at a prehospital stage. Antidote detoxification. Classification of antidotes (by mechanism of therapeutic action). Methods of antidote detoxification. Criteria for the effectiveness of emergency care.	4
8.	Topic 8. Emergency medical care for mechanical injuries. Diagnosis and treatment to prehospital mechanical damage to the skull, spine, thoracic cage organs of the abdominal cavity, pelvis and pelvic organs, limbs. Tactics visiting ambulance Assist with polytrauma, syndrome lasting compression and crushing, external and internal bleeding, hemorrhagic and traumatic shock, hemo- and pneumothorax. Algorithm for providing emergency medical care to road traffic victims traffic accident. Techniques to stop external bleeding. Technique of transport immobilization of different bone segments at the prehospital stage. Chest puncture in severe pneumothorax. Occlusive dressing. Diagnostic and medical equipment of the emergency medical team; emergency department of a multidisciplinary hospital.	4
TOGETHER		26

4.3. Tasks for independent work

For independent work of students the tasks of theoretical character which are insufficiently thoroughly considered within lectures and practical employments are taken out. The student must study literary sources and be ready to answer questions during practical classes and diff. offset. Tasks and tasks are of a practical nature.

№	TOPIC	Number of hours
1.	Organization of the activity of the emergency medical care service of Ukraine (regulatory framework).	6
2.	Organization of emergency and urgent medical care in Ukraine. Initial actions of medical workers in case of emergency of the patient	6
3.	The procedure for providing emergency medical care to victims at the pre-hospital stage. Primary and secondary examination.	6
4.	Organizational structure, main tasks, functions and equipment of the department of emergency (emergency) medical care of a multidisciplinary hospital.	6
5.	Purpose, ethical, deontological and legal aspects of emergency medical care for victims in the prehospital stage.	6
6.	Clinical pharmacology of drugs used in case of emergency of the patient	6
7.	Thrombotic complications in surgery and internal medicine clinic.	6
8.	Inspection of the scene, ensuring the personal safety of medical staff, safety of witnesses and the victim, approaching the victim (patient).	6
9.	Emergency medical care for mechanical injuries at the scene.	6
10.	Emergency medical care for mass injuries.	6
TOGETHER		60

Individual tasks

Selection and review of scientific literature on the subject of the program in anesthesiology and intensive care at the student's choice with the writing of an abstract and its public defense.

Selection and review of scientific literature on the subject of research work of the department with the preparation of a scientific report at a meeting of the SNT or at student conferences.

Scientific research on the topic of research work of the department with the publication of results in scientific journals.

Participation in the work of the student scientific circle and speeches at scientific forums.

Participation in the student Olympiad in the discipline.

Duty in the emergency department of the hospital. Participation in the work of field ambulance crews.

Typical test problems for solving situational problems in practical classes (examples)

Topic №8: "Emergency medical care for mass injuries"

Problem №1

In the center of the earthquake was suppressed by the wreckage of a destroyed house. Extracted after 12 hours. Objectively: excited, poorly oriented in the environment. Pulse 88 beats per minute, on the outer surface of the thighs and lower legs spots of blue-purple color. Movements in the knee and ankle joints are absent.

Problem №2

During the earthquake he fell and hit his head. Woke up after 2 hours after the injury. Complains to head pain, dizziness. Objectively: inhibited, general condition of moderate severity. Pulse 64 beats per minute. AT-135/90 mm Hg. Pupils are evenly narrowed, the reaction to light is alive. The horny reflex is preserved. Determined zhlazhennya left nasolabial folds, tongue deviation to the left nystagmus.

Problem №3

An hour ago he was wounded by broken glass. OBJECTIVE: general state of the average degree of severity. The skin is pale. Pulse 80 beats per minute, satisfactory properties. AT - 115/70 mm Hg. On the anterior surface of the left leg in the middle third of the wound. He pulled his left thigh with a belt. At weakening of a belt bleeding amplifies.

Problem №4

In the epicenter of the earthquake was injured by broken glass. The condition is serious. The skin is pale. Drops of sweat on his face. Thirst. Yawn. Pulse 140 beats per minute, weak. AT-80/55 mm Hg. In the middle third of the left shoulder bleeding wound. Pulsation in the left radial artery is not detected. There is no pathological mobility in the left shoulder.

Problem №5

In focus of the earthquake was skilkove penetrating injury to the left half of the chest. Objectively: severe condition, semi-sitting position, pale skin, severe cyanosis of the lips and hands. Breathing is frequent, difficult. Air is sucked into the wound. Pulse 130 beats per minute, weak filling and tension. Blood pressure - 70/45 mm Hg.

Problem №6

He was suppressed by the ceiling of the building in the epicenter. Extracted from under the blockage. The right leg was under a concrete beam for 4 hours. Objectively: pale skin. Pulse 84 beats per minute. Blood pressure - 120/65 mm Hg. Moderate swelling of the right leg, scratches on the skin and some blue spots. The pulsation of the peripheral artery is weakened.

Problem №7

In the center of the disaster he received a penetrating wound in the abdomen. Objectively: the condition is serious. Pale, adynamic. In a wound loops of intestines are visible. The stomach is tense. Pulse 140 beats per minute, weak filling and tension. Blood pressure - 80/50 mm Hg.

Problem №8

During the earthquake he fell from a height of 7 meters. Objectively: the right lower limb is rotated outwards, shortened, in the middle third of the thigh you can see the angular

deformation. At a palpation pain and pathological mobility in an average third of a hip is defined. There are no active movements in the limb.

Problem №9

Removed after 4 hours from under the rubble of the destroyed building. The left hand was suppressed by the floor slab . Objectively: swelling of the left forearm and hand, scratches on the skin , some blue spots . The pulsation of the radial artery is weakened. Pulse 82 beats per minute. AT - 115/70 mm Hg.

Problem №10

An iron object was wounded in the center of the natural disaster. Objectively: pale. Pulse 150 beats per minute, weak filling and tension. AT-75/55 mm Hg . In the area of the right buttock a wound with torn edges. The wound is filled with clots, moderate bleeding.

4.4. Ensuring the educational process

1. Multimedia projectors, computers, screens for multimedia presentations, lecture presentations.
2. Diagrams, tables, tests, video.
3. Technical teaching aids: simulator operating class.
4. Differential credit tickets.

5. Final control

List of questions of final control (differential test)

1. Organization of the emergency medical service of Ukraine (regulatory framework).
2. Organizational structure, main tasks and functions of the center of emergency medical care and disaster medicine.
3. The main tasks, functions, rights and responsibilities of the emergency (ambulance) team.
4. Table of equipment and personal safety equipment of the emergency (ambulance) team.
5. Organizational structure, main tasks, functions and equipment of the department of emergency (emergency) medical care of a multidisciplinary hospital.
6. Purpose, ethical, deontological and legal aspects of emergency medical care for victims at the pre-hospital stage.
7. Inspection of the scene, ensuring the personal safety of medical personnel, safety of witnesses of the event and the victim, approaching the victim (patient).
8. Ergonomic principles in the work of the field team EMD (when working indoors, outdoors), teamwork.
9. Initial Review (ABC). Tasks of the initial inspection. Technology of carrying out at the conscious and unconscious patient.
10. Provision of medical care in the course of the initial inspection. Determining further tactics at the scene.
11. Tasks of secondary inspection. Indications for a secondary inspection at the scene and on the way to evacuation. Technology of secondary (ABCDE) examination of the victim (patient).
12. Pathogenesis, clinical features, diagnosis and treatment of obstruction of the respiratory tract in patients of different age groups.
13. Ensuring airway patency by tilting the head back or removing the lower jaw (forward). Triple reception of Safar.
14. Ensure patency of the respiratory tract in the trauma of the cervical spine.
15. Revision and cleaning of the oral cavity by manual and hardware methods.
16. The use of oropharyngeal (oropharyngeal) and nasopharyngeal (nasopharyngeal) tube.
17. Ventilation of lungs affected through a mask with the use of hand apparatus for artificial lung (Ambu) submission oxygen.
18. Indications and technique of intubation of the victim.

19. The use of alternative methods to ensure airway patency with a laryngeal mask, laryngeal tube, combi tube.
20. Symptoms of partial and complete airway obstruction when a foreign body, methods of its recovery. Heimlich's reception.
21. Indications and technique of conic puncture and conicotomy.
22. The concept of terminal states. Diagnosis of clinical death. Absolute and relative signs of biological death.
23. Causes of inefficient blood circulation. Diagnosis of sudden death.
24. Classification and assessment of heart rate in cardiac arrest.
25. Technology of cardiopulmonary resuscitation in ventricular fibrillation in adults.
26. Technology of cardiopulmonary resuscitation in ventricular tachycardia in adults.
27. Technology of cardiopulmonary resuscitation with pulseless electrical activity in adults.
28. Technology of cardiopulmonary resuscitation in asystole in adults.
29. Diagnosis of the causes of cardiac arrest, which can be eliminated during resuscitation - four "G": hypoxia, hypovolemia, hyper / hypokalemia, hypomagnesemia, acidosis, hypothermia;
30. Pharmacotherapy for cardiac arrest.
31. Technology of cardiopulmonary resuscitation in the presence of an automatic defibrillator.
32. The duration of cardiopulmonary resuscitation, signs are pointing to its effectiveness and suspension.
33. Diagnosis of the causes of cardiac arrest, which can be eliminated in the process of resuscitation of four "T": tension (tense) pneumothorax, cardiac tamponade, thromboembolism, toxic overdose.
34. Errors and complications that arise during the time of cardiopulmonary resuscitation.
35. Legal and ethical aspects of cardiopulmonary resuscitation ..
36. Diagnosis and emergency medical care for acute coronary syndrome.
37. Diagnosis and emergency medical care for cardiogenic shock.
38. Diagnosis and emergency medical care in hypertensive crisis.
39. Diagnosis and emergency medical treatment for anaphylactic shock.
40. Diagnosis and emergency medical care for hypothermia.
41. Diagnosis and emergency medical care in case of drowning.
42. Diagnosis and emergency medical care in case of electric shock.
43. Diagnosis and emergency medical care for coma of unknown etiology.
44. Diagnosis and emergency medical care for insects associated with diabetes.
45. Diagnosis and emergency medical care in case of unknown gas poisoning.
46. Diagnosis and emergency medical care in case of poisoning by an unknown substance.
47. Diagnosis and emergency medical care for mechanical injuries of the skull.
48. Diagnosis and emergency medical care for mechanical spinal injuries.
49. Diagnosis and emergency medical care for mechanical injuries of the chest.
50. Diagnosis and emergency medical care for mechanical injuries of the abdominal cavity, pelvis and pelvic organs.
51. Diagnosis and emergency medical care for mechanical injuries of the extremities.
52. Diagnosis and emergency medical care for polytrauma.
53. Diagnosis and emergency medical care for long-term compression and crushing syndrome .
54. Diagnosis and emergency medical care for external and internal bleeding.
55. Diagnosis and emergency medical care for traumatic shock.
56. Diagnosis and emergency medical care for hemorrhagic shock.
57. Diagnosis and emergency medical care for hemo- and pneumothorax.
58. Algorithm of actions of the emergency medical care team in case of a traffic accident.
59. General principles of detoxification therapy at the prehospital stage. Antidote therapy.
60. Procedure of emergency medical care brigades in a safe center of mass destruction.

"0" version of the ticket diff. offset

Petro Mohyla Black Sea National University

Educational qualification level - master

Field of knowledge: 22 Health care

specialty 222 Medicine

Course - Emergency and emergency medical care

Option № 0

1. Organization of the activity of the emergency medical care service of Ukraine (regulatory framework) - **maximum number of points - 20.**
2. Providing medical assistance in the course of the initial inspection. Determining further tactics at the scene - **the maximum number of points - 20.**
3. Legal and ethical aspects of cardiopulmonary resuscitation - **maximum number of points - 20.**
4. Diagnosis and emergency medical care for traumatic shock - **the maximum number of points - 20.**

Approved at the meeting of the Department of Therapeutic and Surgical Disciplines, minutes № ____ from " __ " _____ 2020.

Head of Department

doctor of medical sciences Zak M.Yu.

Examiner

Ph.D. Grishchenko GV

An example of the task of KKR

Option № 0

I. Questions

a. Clinical manifestations of acute liver failure ..

b. Electrical defibrillation technique.

II. Tests

1. As known diseases in case of which in the pleural cavity is the air?

- A. This is not a disease, but a normal condition of the pleural cavity
- B. Pleurisy
- C. Pneumopleurothorax
- D. Pneumothorax
- E. Pneumopulmothorax

2. Determine the characteristic clinical signs of open pneumothorax:

- A. Severe general condition of the patient
- B. Forced position
- C. Subcutaneous emphysema
- D. Isolation of air and blood bubbles from the wound with a characteristic sound during respiration
- E. Chest pain

3. What is the main clinical sign of intestinal obstruction?

- A. Growing abdominal pain
- B. Sudden abdominal pain

- C. Cramps in the abdomen
- D. Constant abdominal pain
- E. Slight abdominal pain

4. Patient E. aged 65 years complains of squeezing pain in the thoracic region. Pharmaceutical worker suspected myocardial miokarda. Yake of these investigations in this case is the best?

- A. Physical research
- B. Instrumental research
- C. Laboratory research
- D. Thoracentesis
- E. Electrocardiography

5. What is the main symptom that develops when the hollow organ of the abdominal cavity is damaged ?

- A. Abdominal pain
- B. The face of Hippocrates
- C. Increase in leukocytosis in the blood
- D. Schottkin-Blumberg symptom
- E. Pasternatsky's symptom

6. Transportation of the victim with a fracture of the spine in the absence of a shield is carried out in the position:

- A. Sitting.
- B. On the abdomen
- C. On the left side
- D. On the right side
- E. On the back

7. Pulse oximetry is a method for determining:

- A. The number of heartbeats per 1 minute;
- B. The amount of hemoglobin in red blood cells;
- C. The amount of oxygen in the arterial blood;
- D. The amount of hemoglobin in the venous blood;
- E. The amount of oxygen in the arterial volume of blood hemoglobin.

8. What is the partial pressure of carbon dioxide in the arterial blood PCO_{2a} causes hypercapnia:

- A. > 44 mm Hg;
- B. > 40 mm Hg;
- C. > 35 mm Hg;
- D. > 30 mm Hg;
- E. > 25 mm Hg

9. About what classical assignment the "left hand the left foot" indicates:

- A. And;
- B. II;
- C. W;
- D. aVR;
- E. aVL.

10. If the electrodes are placed on the right arm and left leg, then what lead should be called:

- A. And;
- B. * II;
- C. W;
- D. IV;
- E. V.

And so 15 options

6. Evaluation criteria and tools for diagnosing learning outcomes

Control methods

- Survey (testing of theoretical knowledge and practical skills).
- Test control.
- Writing a review of scientific literature (abstracts).
- Preparation of presentations.

Current control. Testing in practical classes of theoretical knowledge and the acquisition of practical skills, as well as the results of independent work of students. Supervised by teachers according to the specific purpose of the curriculum. Assessment of the level of students' preparation is carried out by: interviewing students, solving and analyzing situational tasks and test tasks, monitoring the acquisition of practical skills.

Intermediate control. Checking the possibility of using students for the practical application of theoretical knowledge and practical skills on all topics studied, as well as the results of independent work of students. Carried out in the last lesson on the topic by passing practical skills, testing.

Final control. Students who have attended all lectures, classrooms, full-time independent work and scored at least **70 points per semester in the semester** are allowed to take the final control (differential test) .

Distribution of points received by students

The student can get a maximum of **120 points** for current learning activities. Accordingly, a positive assessment in each seminar can be **from 5.4 to 9.2 points**. A score below **5.4 points** means "unsatisfactory", the lesson is not credited and must be practiced in the prescribed manner .

In order to assess learning outcomes, the final control in the form of diff. offset. On the diff. The student can get a maximum of **80 points**. Diff. the test is considered passed if the student received at least **50 points**.

Assessment of student performance

Type of activity (task)	Maximum number of points
practical lesson 1	9.2
practical lesson 2	9.2
practical lesson 3	9.2
practical lesson 4	9.2
practical lesson 5	9.2
practical lesson 6	9.2
practical lesson 7	9.2
practical lesson 8	9.2
practical lesson 9	9.2
practical lesson 10	9.2
practical lesson 11	9.2
practical lesson 12	9.2
practical lesson 13	9.2
Together	120
Diff. test	80
Together with diff. offset	200

Criteria for assessing knowledge

With a score of 8.1 - 9.2 points in the practical lesson and 71 - 80 points in the test (A on the ECTS scale and 5 on the national scale) the student's response is evaluated if it demonstrates

deep knowledge of emergency and urgent medical care, ability to apply theoretical material to practical analysis and has no inaccuracies.

With a score of 6.1 - 8 points in the practical lesson and 61 - 70 points in the test (B and C on the ECTS scale and 4 on the national scale) the answer is evaluated if it shows knowledge, ability to apply them in practice, but some fundamental inaccuracies are allowed.

With a score of 5.4 - 6 points in the practical lesson and 50 - 60 points in the test (D and E on the ECTS scale and 3 on the national scale) the student's answer is evaluated provided that he knows the main theoretical principles and can use them in practice.

7. Recommended sources of information

7.1. Basic

1. Handbook of medical care at the prehospital stage (edited by IS Zozuli). Kyiv, Health, 2004.
2. Domestic care (algorithms, manipulations): Methodical manual / VO Krylyuk, VD Yurchenko, AA Hudyma and others. - K.: SPE "Interservice", 2014. - 84 p.
3. Emergency medicine: ambulance and emergency medical care / I.S. Zozulya, A.V. Vershigora, VI Bobrova and others; for order. IS Zozuli. – K.: VSV "Medicine", 2012. - 728 p.
4. Order of the Ministry of Health of Ukraine dated 05.06.2019 № 1269 "On approval and implementation of medical and technological documents for standardization of emergency medical care"
5. Emergency medical care. For order. F.S. Glumchera, VF Moskalenka K.: "Medicine" - 2006. - 632 p.
6. Regeda MS, Kresyuna VY Emergencies. - Lviv, 2003. - 890 p.
7. Roschin GG, Krylyuk VO and others. Emergency medical care (basic life support). Kyiv, 2009. 125p.
8. Tarasyuk VS, Matviychuk MV, Palamar IV, Korolyova ND, Kuchanska GB, Novitsky NO Emergency medicine. Organization of first aid: Textbook. - K.: «Медицина», 2011. - 526 c.
9. Tarasyuk VS, Matviychuk MV Palamar MV, Polyarush VV, Korolyova ND, Podolyan VM Malik SL, Krivetska NV First medical (emergency) care with elements of tactical medicine at the pre-hospital stage in emergency situations. - K.: Медицина, 2015.
10. Titov II, Voloshinsky OV, Glushko LV, Datsyuk OI Algorithms for providing emergency care in critical situations. - Vinnytsia: New book, 2010.
11. Emergency medical care: a textbook / [M. I. The Swede, A. Alexander Hudyma, S. M. Heryak et al.] for order. MI Swede. - Ternopil: TSMU, 2015. - 420 p.
12. Emergency medical care (acute heart condition) / G.G. Roshchin, OM, Parkhomenko, VO Krylyuk et al.: ed. G.G. Roshchina. - Kyiv: Interservice, 2011. - 159 p.
13. Emergency medical care: prehospital stage / manipulation algorithms (basic level). / G.G. Roschin, AA Gudima, V.Yu. Kuzmin and others. K., 2012 - 84 p.
14. 30 emergencies in therapy: Handbook // Ed. Prof. Yu.M. Bridge. - Vinnytsia, 2013.

7.2. Additional

1. Military and clinical toxicology. The textbook for students in higher educational institutions IV level of accreditation / Under Ed. M.M. Cossack. - Kyiv, 2007. - 376 p.
2. Handbook of medical care at the prehospital stage (edited by IS Zozuli). Kyiv, Health, 2004.
3. Zhebel VM, Shaprinsky VO, Gumenyuk AF, Lozynsky SE First aid for emergencies. - Vinnytsia: Delo, 2005.
4. Emergency conditions in endocrinology: teach. - method. way. (MV Vlasenko, AV Palamarchuk, VS Vernygorodsky, etc.) - K.: RVH "FERZ", 2010. - 104p.

5. Urgent conditions in medicine / Under Ed. Professor VP Small. - Vinnytsia, 2000.
6. Emergency medical care. For order. F.S. Glumchera, VF Moskalenka K .: "Medicine" - 2006. - 632 p.
7. Safar P. Cardiopulmonary-cerebral resuscitation / Per. with English - M .: Medicine, 2004. -216 p.
8. Modern classifications and standards of treatment of diseases of internal organs. Urgent conditions in therapy: a guide / ed. Yu. M. Mostovoy; Vinnytsia National Medical University named after MI Pirogov. - 16th ed., Supplemented and revised. - Kyiv: Center for State Land Cadastre, 2014. - 679 p.
9. Swede MI, Gudima AA, GeryakSM. etc. Emergency medical care: manual - Ternopil: TSMU, 2015 - 420 p.

Information resources

1. National Library. VI Vernadsky - www.nbu.gov.ua.
2. State Service of Ukraine for Emergencies - www.dsns.gov.ua.
3. Ministry of Health of Ukraine - <http://www.moz.gov.ua>.
4. dn_20190605_1269 (pdf, 99 Kb)
5. dn_20190605_1269_dod (pdf, 2 Mb)
6. https://moz.gov.ua/uploads/2/12737-dn_20190605_1269_dod.pdf
7. http://lib.sumdu.edu.ua/library/DocumentView?doc_id=717010
8. http://mtd.dec.gov.ua/images/dodatki/2015_916_MA/2015_916_YKPMD_MA.pdf